



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/785,598      | 02/16/2001  | Thomas Thaler        | 700-212RP           | 4386             |

22191 7590 07/19/2004

GREENBERG-TRAURIG  
1750 TYSONS BOULEVARD, 12TH FLOOR  
MCLEAN, VA 22102

EXAMINER

FERRIS, DERRICK W

ART UNIT PAPER NUMBER

2663

DATE MAILED: 07/19/2004

9

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/785,598

**Applicant(s)**

THALER ET AL.

**Examiner**

Derrick W. Ferris

**Art Unit**

2663

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 16 February 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,5-14,17,18 and 20 is/are rejected.
- 7) ☒ Claim(s) 3,4,15,16 and 19 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 February 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 4.7.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. **Claims 1, 2, 6-9, 13, 14 and 18** are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,621,895 A to *Weis et al.* (“*Weis*”).

As to **claim 1**, *Weis* teaches generating a network-wide signal using a reference time generator as part of frame clock generator which is distributed to each node attached to the star coupler, see e.g., column 6, line 63 to column 7, line 33. Since all other stations 20-60 adapt their signal processing to the reference frame clock to ensure that their messages arrive at the central star coupler 1 on time, *Weis* also teaches converting at each respective node the network wide time signal to a local synchronization signal as well as synchronizing the timing of each node using the local synchronization signal.

As to **claim 2**, each node tracks the propagation delay based on the frame clock generator signal as well as using a testing sequence, see e.g., column 3, lines 30-40. The propagation delay is further used to ensure that the local node transmits in synchronization to the star coupler further teaching generating the local synchronization signal using the signal propagation delay of the respective node.

Art Unit: 2663

As to **claim 6**, the reference clock has an associated frequency.

As to **claims 7 and 8**, see e.g., column 3, lines 30-38 where frame transmit clock is determined based on propagation delay.

As to **claim 9**, see e.g., column 8, lines 43-50 where the propagation delay, such as V0, is added to the delay.

As to **claim 13**, see similar rejection to claim 1.

As to **claim 14**, see similar rejection to claim 2.

As to **claim 18**, see similar rejection to claim 1. Examples of applications include audio and video, see e.g., column 1, lines 45-67.

3. **Claims 1, 5-7, 10, 13, 17, 18, and 20** are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,032,261 A to *Hulyalkar*.

As to **claim 1**, a step of generating is shown e.g., in figure 3 using a cycle\_start packet. Receiving the cycle\_start packet at nodes such as the one shown in figure 4 further shows a step of distributing. In particular, figure 4 teaches converting the network-wide time signal to a local synchronization signal as part of the cycle counter 72. This counter is further used to synchronize the timing of the node using the local synchronization signal.

As to **claim 5**, see e.g., the cycle\_start packet.

As to **claim 6**, see e.g., column 2, lines 51-67 where the frequency is based off a cycle clock.

As to **claim 7**, see e.g., figure 4 with respect to phase locking the local synchronization signal and column 5, lines 1-29.

Art Unit: 2663

As to **claim 10**, see e.g., column 3, lines 20-54 with respect to being IEEE 1394 compliant.

As to **claim 13**, see similar rejection to claim 1.

As to **claim 17**, see similar rejection to claim 10.

As to **claim 18**, see similar rejection to claim 1. Examples of applications include e.g., TV, PC, VCRs, etc., see e.g., column 1, lines 12-30.

As to **claim 20**, see similar rejection to claim 10.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. **Claims 11 and 12** are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,032,261 A to *Hulyalkar* in view of “Application Critical Parameters for Rubidium Standards” to (“*Weidemann*”).

In making a proper obviousness rejection under MPEP 706.02(j), the examiner will address the following four steps:

- a) *the relevant teachings of the prior art relied upon, preferably with reference to the relevant column or page number(s) and line numbers where appropriate;*
- b) *the difference of differences in the claim(s) over the applied cited references;*
- c) *the proposed modification of the applied reference(s) necessary to arrive at the claimed subject matter; and*

*d) an explanation why one skilled in the art at the time of the invention was made would have been motivated to make the proposed modification.*

As such to **claim 11**, for step (a) *Hulyalkar* discloses limitations in the base claim.

For step (b) *Hulyalkar* is silent or deficient to the further limitation wherein the step of generating the network wide time signal includes the step of utilizing a rubidium reference signal generator. In particular, *Hulyalkar* discloses using a crystal oscillator 42, see e.g., column 4, lines 40-51 and figure 3.

*Weidemann* teaches the further recited limitation above at e.g., in the summary on page 87.

For step (c), the proposed modification of the above-applied reference(s) necessary to arrive at the claimed subject matter would be to modify *Hulyalkar* to clarify that an oscillator is a rubidium oscillator.

In order to establish a prima facie case of obviousness for step (d), three basic criteria must be met. The three criteria according to MPEP 706.02(j) are as follows:

*First there must be some suggestion or modification, either in the reference(s) themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine the reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations.*

As such, for step (d) examiner notes that it would have been obvious to one skilled in the art prior to applicant's invention to include the further limitation wherein the step of generating the network wide time signal includes the step of utilizing a rubidium reference signal generator. In particular, the motivation for modifying the reference or to combine the reference teachings would be to provide highly reliable clocking source. In particular, *Weidemann* cures the above-cited deficiency by providing

Art Unit: 2663

a motivation found at e.g., in the summary on page 87. Second, there would be a reasonable expectation of success since using rubidium oscillators is well known in the art as a clocking source. Thus the references either in singular or in combination teach the above claim limitation(s).

As to **claim 12**, examiner notes a similar rejection as claim 11 where *Weidemann* also teaches using GPS as taught in the summary on page 87 (i.e., GPS provides a long term reference for Rb clocks). In particular, one skilled in the art would be motivated to use GPS since it would be expensive to deploy a rubidium clock at every site such that each site can get their clocking from one central source via GPS.

***Allowable Subject Matter***

6. **Claims 3, 4, 15, 16, and 19** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Derrick W. Ferris whose telephone number is (703) 305-4225. The examiner can normally be reached on M-F 9 A.M. - 4:30 P.M. E.S.T.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau Nguyen can be reached on (703) 308-5340. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.


Art Unit: 2663

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



DWF

Derrick W. Ferris  
Examiner  
Art Unit 2663



CHI PHAM  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600 7/14/08